1. An optical lithographic exposure apparatus comprising:

a wafer stage comprising a means of supporting a semiconductor wafer;

a mask stage comprising a means of holding a first mask and a second mask and maintaining a fixed relative position between said first mask and said second mask;

a light source comprising a means of selectively shining actinic light through one of said first mask and said second mask;

an imaging lens capable of focusing said actinic light onto said semiconductor wafer; and

a means of stepping said mask stage across said semiconductor wafer.

2. The apparatus according to Claim 1 wherein said apparatus consists of one of the group of: optical stepper and optical scanner.

3. The apparatus according to Claim 1 wherein said fixed relative position between said first mask and said second mask comprises adjacent, coplanar, and consistent with direction of said stepping.

4. The apparatus according to Claim 1 wherein said fixed relative position between said first mask and said second mask comprises adjacent, coplanar, and perpendicular to direction of said stepping.

5. The apparatus according to Claim 1 wherein said mask stage further comprises a means of aligning said first mask and said second mask wherein said aligning may be performed for both said first mask and said second mask prior to any exposing and stepping.

6. The apparatus according to Claim 5 wherein said means of aligning comprises a single lateral control (x) and an angular control (θ).

7. The apparatus according to Claim 5 wherein said means of aligning comprises two lateral controls (x and y) and an angular control (θ).

8. The apparatus according to Claim 5 wherein said means of aligning is independent for each of said first mask and said second mask.

9. The apparatus according to Claim 1 wherein said mask stage further comprises a means of holding at least one additional mask and maintaining a fixed relative position between said first mask, said second mask, and said additional mask.

10. The apparatus according to Claim 1 further comprising a microscope viewer wherein alignment marks on said first mask and said microscope viewer and said second mask and said microscope viewer may be aligned.

11. An optical lithographic exposure apparatus comprising:

a wafer stage comprising a means of supporting a semiconductor wafer;

a mask stage comprising a means of holding a first mask and a second mask and maintaining a fixed relative position between said first mask and said second mask and a means of aligning said first mask and said second mask prior to exposing and stepping;

a light source comprising a means of selectively shining actinic light through one of said first mask and said second mask;

an imaging lens capable of focusing said actinic light onto said semiconductor wafer; and

a means of stepping said mask stage across said semiconductor wafer.

12. The apparatus according to Claim 11 wherein said apparatus consists of one of the group of: optical stepper and optical scanner.

13. The apparatus according to Claim 11 wherein said fixed relative position between said first mask and said second mask comprises adjacent, coplanar, and consistent with direction of said stepping.

14. The apparatus according to Claim 11 wherein said fixed relative position between said first mask and said second mask comprises adjacent, coplanar, and perpendicular to direction of said stepping.

15. The apparatus according to Claim 11 wherein said means of aligning comprises a single lateral control (x) and an angular control (θ).

16. The apparatus according to Claim 11 wherein said means of aligning comprises two lateral controls (x and y) and an angular control (θ).

17. The apparatus according to Claim 11 wherein said means of aligning is independent for each of said first mask and said second mask.

18. The apparatus according to Claim 11 wherein said mask stage further comprises a means of holding at least one additional mask and maintaining a fixed relative position between said first mask, said second mask, and said additional mask and a means of aligning said additional mask.

19. The apparatus according to Claim 11 further comprising a microscope viewer wherein alignment marks on said first mask and said microscope viewer and said second mask and said microscope viewer may be aligned.

20. A method to pattern a photoresist layer in the manufacture of an integrated circuit device comprising:

depositing a photoresist layer overlying a wafer;

loading a first mask and a second mask in a mask stage of an exposure apparatus wherein said mask stage maintains a fixed relative position between said first mask and said second mask;

aligning said first mask and said second mask;

indexing said wafer to a starting field to set a current field;

thereafter scanning said first mask to expose said current field;

thereafter stepping said wafer to a next field unexposed by said first mask to set a new said current field;

thereafter repeating said scanning and stepping until every said field on said semiconductor substrate is exposed with said first mask;

thereafter returning said wafer to said starting field to set said current field;

thereafter scanning said second mask to expose said current field;

thereafter stepping said wafer to a next field unexposed by said second mask to set a new said current field;

thereafter repeating said scanning and stepping until every said field on said semiconductor substrate is exposed with said second mask to thereby superimpose the patterns of said first mask and said second mask in every said field; and

developing said photoresist layer to thereby complete said patterning in the manufacture of said integrated circuit device.

21. The method according to Claim 20 wherein said fixed relative position between said first mask and said second mask comprises adjacent, coplanar, and consistent with direction of said stepping through.

22. The method according to Claim 20 wherein said fixed relative position between said first mask and said second mask comprises adjacent, coplanar, and perpendicular to direction of said stepping through.

23. The method according to Claim 20 wherein first mask comprises a phase-shifting mask and wherein said second mask comprises a binary intensity mask.

24. A method to pattern a photoresist layer in the manufacture of an integrated circuit device comprising:

depositing a photoresist layer overlying a wafer;

loading a first mask and a second mask in a mask stage

of an optical lithographic, stepper wherein said mask stage maintains a fixed relative position between said first mask and said second mask;

aligning said first mask and said second mask;

indexing said wafer to a starting field to set a current field;

thereafter scanning said first mask to expose said current field;

thereafter scanning said second mask to expose an adjacent field;

thereafter stepping said wafer to a next field unexposed by said first mask to set a new said current field; and

thereafter repeating said scanning and stepping until every said field on said semiconductor substrate is exposed;

thereafter returning said wafer to said starting field to set said current field;

thereafter stepping said wafer to a next field unexposed by said second mask to set a new said current field;

thereafter scanning said second mask;

thereafter stepping said wafer to a next field unexposed by said first mask to set a new said current field;

thereafter scanning said first mask to expose said current field;

thereafter repeating said scanning and stepping until every said field on said semiconductor substrate is exposed to thereby superimpose the patterns of said first mask and said second mask in every said field; and

developing said photoresist layer to thereby complete said patterning in the manufacture of said integrated circuit device.

25. The method according to Claim 24 wherein said fixed relative position between said first mask and said second mask comprises adjacent, coplanar, and consistent with direction of said stepping through.

26. The method according to Claim 24 wherein first mask comprises a phase-shifting mask and wherein said second mask comprises a binary intensity mask.

27. The method according to Claim 24 wherein any of said fields at the beginning and the end of rows of said fields is only exposed through a single said mask.